

Revision Date: 2012-05-15

Reason for Revision: Updated Composition and Transportation Information

SECTION 1: IDENTIFICATION OF THE PRODUCT AND COMPANY

Product Name: HI 38001B-0 LR Sulfate Low Range Reagent

Application: Determination of Sulfate in Water Samples

Company Information (USA):

Hanna Instruments, Inc.
584 Park East Dr, Woonsocket, Rhode Island, USA 02895

Technical Service Contact Information:

1-800-426-6287 (8:30AM - 5:00PM ET)
+1-401-766-4260 (8:30AM - 5:00PM ET)

USA Emergency Contact Information:

1-800-424-9300 (Chemtrec 24Hr. Emergency)

International Emergency Contact Information:

+1-703-527-3887 (Chemtrec 24Hr. Emergency)

E-mail Address:

tech@hannainst.com

SECTION 2: HAZARD IDENTIFICATION

Non-hazardous product as specified in Directives 67/548/EEC and 1999/45/EC.
Non-hazardous product as specified in OSHA Regulation 29 CFR 1910.1200.
Non-hazardous product as specified in Canadian Regulation SOR/88-66.

SECTION 3: COMPOSITION AND COMPONENT INFORMATION

Component: Barium Chloride Dihydrate

EC-No.: 233-788-1

CAS-No.: 10326-27-9

Hazard: T, Xn

Phrases: R: 20-25

Content: < 5%

SECTION 4: FIRST AID MEASURES

After Inhalation: Remove to fresh air. Give artificial respiration if victim is not breathing. Give oxygen if breathing is difficult.

After Skin Contact: Flush affected area with copious amounts of water for at least 15 minutes. Remove contaminated clothing.

After Eye Contact: Rinse out with plenty of water with the eyelid held wide open. Call in ophthalmologist if necessary.

After Swallowing: Make victim drink plenty of water. In severe cases, induce vomiting and call in physician. Subsequently administer:
Sodium sulfate (1 tablespoon/1/4 l water).

General Information: Not available

SECTION 5: FIRE-FIGHTING MEASURES

Suitable Extinguishing Media:

Water spray, Carbon Dioxide, Dry Chemical Powder, Appropriate Foam

Special Risks:

Non-combustible. Development of hazardous combustion gases or vapors possible in the event of fire. The following may develop in event of fire:
 Hydrochloric Acid

Special Protective Equipment:

Do not stay in dangerous zone without suitable chemical protection clothing and self-contained breathing apparatus.

Additional Information:

Contain escaping vapors with water. Prevent fire-fighting water from entering surface water or ground water.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions:

Avoid substance contact. Avoid generation of vapors/aerosols. Ensure supply of fresh air in enclosed rooms.

Environmental Precautions:

Do not discharge into the drains/surface waters/groundwater.

Additional Notes:

Take up with liquid-absorbent material. Clean up affected area and dispose according to local regulation.

SECTION 7: HANDLING AND STORAGE

Handling:

No further requirements.

Storage:

Store tightly closed. Accessible only for authorized persons.

SECTION 8: EXPOSURE CONTROL/PERSONAL PROTECTION

<i>Type</i>	<i>Value</i>	<i>Source</i>	<i>Type</i>	<i>Value</i>	<i>Source</i>
Barium Chloride Dihydrate					
TWA (8hr)	0.5 mg (Ba)/m ³	Belgium	TWA (8hr)	0.5 mg (Ba)/m ³	Canada (Ontario)
TWA (8hr)	0.5 mg (Ba)/m ³	Canada (Quebec)	TWA (8hr)	0.5 mg (Ba)/m ³	France
TWA (8hr)	0.5 mg (Ba)/m ³	Germany	TWA (8hr)	0.5 mg (Ba)/m ³	Greece
TWA (8hr)	0.5 mg (Ba)/m ³	Hungary	TWA (8hr)	0.5 mg (Ba)/m ³	Italy
TWA (8hr)	0.5 mg (Ba)/m ³	Netherlands	TWA (8hr)	0.5 mg (Ba)/m ³	Portugal
TWA (8hr)	0.5 mg (Ba)/m ³	Romania	TWA (8hr)	0.5 mg (Ba)/m ³	Spain
TWA (8hr)	0.5 mg (Ba)/m ³	UK	TWA (8hr)	0.5 mg (Ba)/m ³	USA (ACGIH)
TWA (8hr)	0.5 mg (Ba)/m ³	USA (OSHA)			

Engineering:

Maintain general industrial hygiene practice.

Personal Protective Equipment:

Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be determined with the respective supplier.

Respiratory Protection:

Required when vapors/aerosols are generated.

Protective Gloves:

Compatible chemical-resistant gloves

Eye Protection:

Goggles or face mask

Industrial Hygiene:

Immediately change contaminated clothing. Apply skin-protective barrier cream. Wash hands and face after working with substance. Under no circumstances eat or drink at workplace. Work under hood. Do not inhale substance.

SECTION 9: PHYSICAL/CHEMICAL PROPERTIES

Appearance: Colorless liquid	Odor: Odorless	Density at 20°C: 1.00 at 25°C
Melting Point: ND	Boiling Point: NA	Solubility: Soluble
pH at 20°C: ~ 6 at 25°C	Explosion Limit: NA	Flash Point: NA
Thermal Decomp.: NA		

SECTION 10: STABILITY AND REACTIVITY

Conditions to be Avoided:

Heating

Hazardous Polymerization:

Will not occur.

Further Information:

Not available

Hazardous Decomposition Products:

Toxic gases: See section 5.

Substances to be Avoided:

Strong oxidizing agents, strong reducing agents

SECTION 11: TOXICOLOGICAL INFORMATION

Product Toxicity

Quantitative data on the toxicity of this product is not available.

Potential Health Effects:

Inhalation: Irritations of the mucous membranes, coughing, and dyspnoea.

Skin Contact: Irritations.

Ingestion: May be harmful if swallowed. The following applies to soluble barium compounds in general: after swallowing: mucosal irritation, nausea, salivation, vomiting, dizziness, pain, colics, and diarrhoea. Systemic effects include: cardiac dysrhythmias, bradycardia (subdued cardiac activity), rise in blood pressure, shock and circulatory collapse as well as muscular rigidity.

Further Data: Further hazardous properties cannot be excluded. The product should be handled with the usual care when dealing with chemicals.

Component Toxicity

Acute Toxicity:

Chronic Toxicity:

Not Available

Barium Chloride Dihydrate

LD50: Oral - Rat - 118 mg/kg (anhydrous)

LD50: Oral - Guinea Pig - 76 mg/kg (anhydrous)

Additional Data:

APPLICABLE TO PARTIAL COMPONENT:

The following applies to Barium Chloride – as the pure substance:

Subacute to chronic toxicity

Mutagenicity (mammal cell test): negative. (in vitro) (IUCLID).

Bacterial mutagenicity: Ames test: negative (IUCLID).

SECTION 12: ECOLOGICAL INFORMATION

Quantitative data on the toxicity of this product is not available.

APPLICABLE TO PARTIAL COMPONENT:

The following applies to Barium chloride – as the pure substance:

Ecotoxicological effects

Biological effects:

Endangers drinking-water supplies if allowed to enter soil or water. Formation of health-hazardous mixtures possible with water.

Fish toxicity: *L. idus* LC50: 870 mg/L /48 h (anhydrous substance) (IUCLID).

Daphnia toxicity: *Daphnia magna* EC50: 21.9 mg/L /48 h (anhydrous substance) (IUCLID).

Biologic degradation:

Methods for the determination of biodegradability are not applicable to inorganic substances.

Further Data: Do not allow to enter waters, waste waters, or soil!

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal: Chemical residues are generally classified as special waste and thus covered by local regulations. Contact local authorities or disposal companies for advice. Handle contaminated packaging in the same way as the substance itself.

SECTION 14: TRANSPORTATION INFORMATION

Land:

Not subject to transport regulations.

Sea:

Not subject to transport regulations.

Air:

Not subject to transport regulations.

SECTION 15: REGULATORY INFORMATION

Labeling according to EC Directives:

Non-hazardous according to Directives 67/548/EEC and 1999/45/EC.

S-phrases: 45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Contains: Barium chloride dihydrate

SECTION 16: OTHER INFORMATION

Text of R-phrases under Section 3

20:Harmful by inhalation.
 25:Toxic if swallowed.

Revision Information

Revision Date: 2012-05-15

Supersedes edition of: 2009-06-10

Reason for revision: Updated Composition and
 Transportation Information

Legend

NA: Not Applicable
 ND: Not Determined

**THE INFORMATION CONTAINED HEREIN IS BASED ON THE PRESENT STATE OF OUR
 KNOWLEDGE. IT CHARACTERIZES THE PRODUCT WITH REGARD TO THE
 APPROPRIATE SAFETY PRECAUTIONS. IT DOES NOT REPRESENT A GUARANTEE OF
 THE PROPERTIES OF THE PRODUCT.**